

IN THE SPECIFICATION:

Please amend the Specification as follows.

Please replace the paragraph beginning on page 9, line 9 with the following replacement paragraph:

The S/P module 103 converts the possibly channel coded (ENC) (e.g. Turbo coded or convolutional coded) and modulated (MOD) complex valued symbol streams into at least two parallel complex valued symbol streams in which at least some of the complex symbols are different from each other. In modules 104, the two symbol streams are separately transmit diversity coded, using orthogonal (transmit diversity) code matrices C1 and C2, each of arbitrary dimension and rate. According to certain embodiments of the present invention, the symbol rate is the same as an average symbol rate of the orthogonal code matrices. The symbols in the (transmit diversity) code matrices C1 and C2, or the (transmit diversity) code matrices themselves are mixed using a linear transformation U in module 105, to generate transformed transmit diversity code matrices X1 and X2. The transformed code matrices X1 and X2 are used to construct a transmission code matrix in the code construction module 106. The transmission code matrix is transmitted using at least three transmit antennas or paths or beams 109 using any substantially orthogonal signaling, e.g. different orthogonal codes (e.g. Hadamard codes) or different time slots or different Fourier waveforms (OFDM waveforms/subcarriers) or different frequency bands can be used. If optional parallel transmission is used to increase the symbol rate the S/P module can output more than two